

Project Title : Library Management System

Submission Last Date : 11th December 2017.

Subject : Computer Programming II

Subject Code : CSCI-504-M05

Professor : Azhar Bhatt

Exam Type : Midterm II

Name :Shariq Khan

Student Id : 1225726

Graduate – MS- CS
Fall 2017.

ABSTRACT

The Library Management Systems aims to provide a computerized solution to better organize the collection of library items. The library items considered in the project are Books, CDs and Videos for now. The project focuses on a personalized solution for people, who collect books, CD and Videos. The system provides an easy and only required functionalities to make it simple and easy to use without any compilation.

There are mainly two main functions of adding and deleting a book, CD or Video from the Library Database System. There are also some add-on features added to keep track of Library items like a bar graph to view the collection counts. Also an additional feature is added to provide a better user experience like labeling the details of items and along with clearing the textfield.

The Project is designed keeping in mind of simplicity and better user experience. It is rather an attempt to maintain library items reducing manual sorting and enhancing the accuracy.

1. INTRODUCTION

The project aims at delivering a solution for a personalized library.

1.1 PROJECT AIM AND OBJECTIVE

The aim and objective of the project is to provide a simple and user-friendly experience to organize a personal collection of library items. The library management system provides a functionality to add or delete or update a collection.

1.2 BACKGROUND OF PROJECT

Library Management System is an application which can be categorized by size either small or medium or large. This project is designed for a small collection of items.

1.3 OPERATION ENVIRONMENT

PROCESSOR	Intel Dual Core or Higher
OPERATING SYSTEM	Windows 10

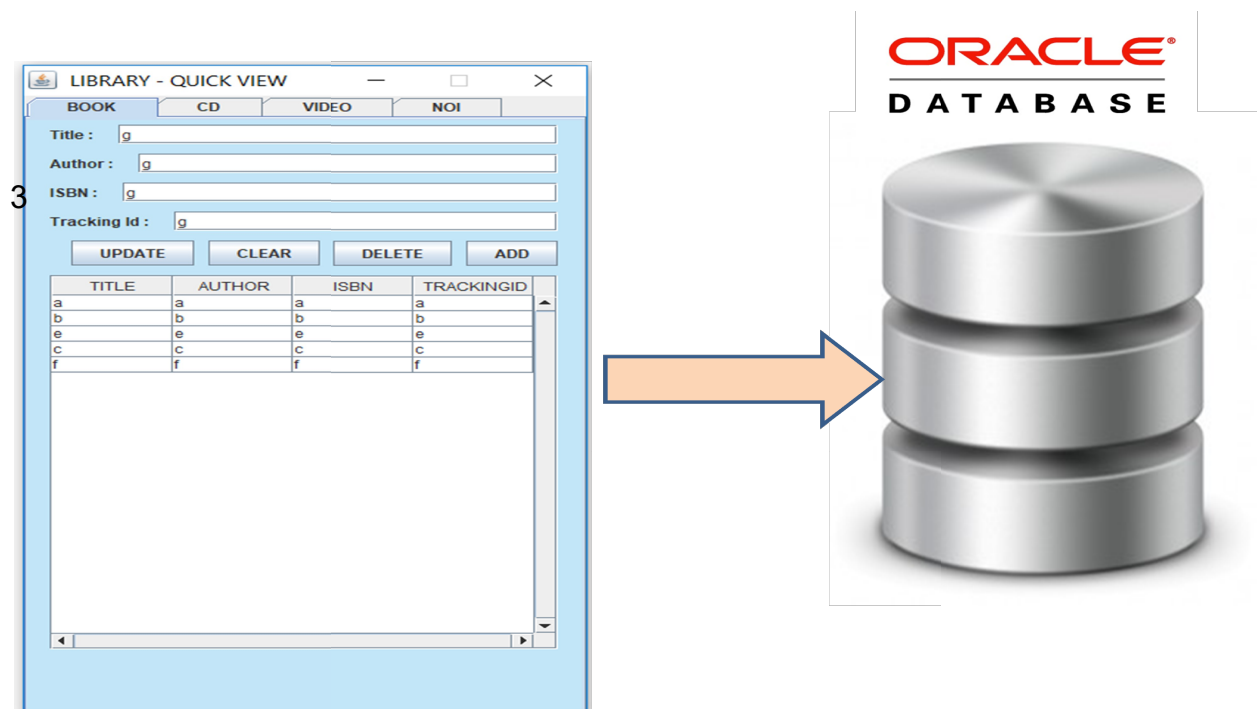
MEMORY	1 GB RAM or Higher
HARD DISK	Depends on Data Storage.
DATABASE	Oracle 11g.
JAVA RUNTIME ENVIRONMENT	1.8.0_151

1.4 SOFTWARE

Programming IDE	IntelliJ Idea Community Version 2017.2
Database	Oracle 11g Express Edition Release 11.2.0.20
Database Developer Tool	Oracle SQL Developer V17.3.1.279
JAVA	Java SDK 1.8

2. SYSTEM ARCHITECTURE

The program has been coded in Java and the for the User Interface Swing has been used. In the Back-End database is used and server is hosted in local server in my case is the local machiene. The below diagram is the architecture of the Project.



3. FUNCTIONS

The Functionalities are defined into two categories namely as below.

3.1 USER

There are label and alongside user textfields which are used in order to take input from user.

The Clear button is also added into the panel so that text entered are cleared and user can provide details of next library items.

Each operation is followed by message box popup in order to pass information of the operation.

There are three panel for each library items which are listed as below

1. Book.
2. CD.
3. Video.

3.2 DATABASE


The Panel provides several button to provide better experience.

UPDATE : The update buttons updates the database table by querying the database and updating the table with library items entered.

DELETE : The delete button while any library item is selected in the table Deletes the items from the database and also from the table.

ADD : The add button when all the details are added to the text fields adds a row in the table and along with add a row in the database as well.

A Table is also added in order to view the collection of Library items . The table is linked to the database and can be populated with the collections by update button. This is repeated in each panel of Library items (Book , CD , Videos).

 LIBRARY - QUICK VIEW

BOOK

CD

VIDEO

NOI

Title : f

Author : f

ISBN : f

Composer : f

Tracking Id :

UPDATE

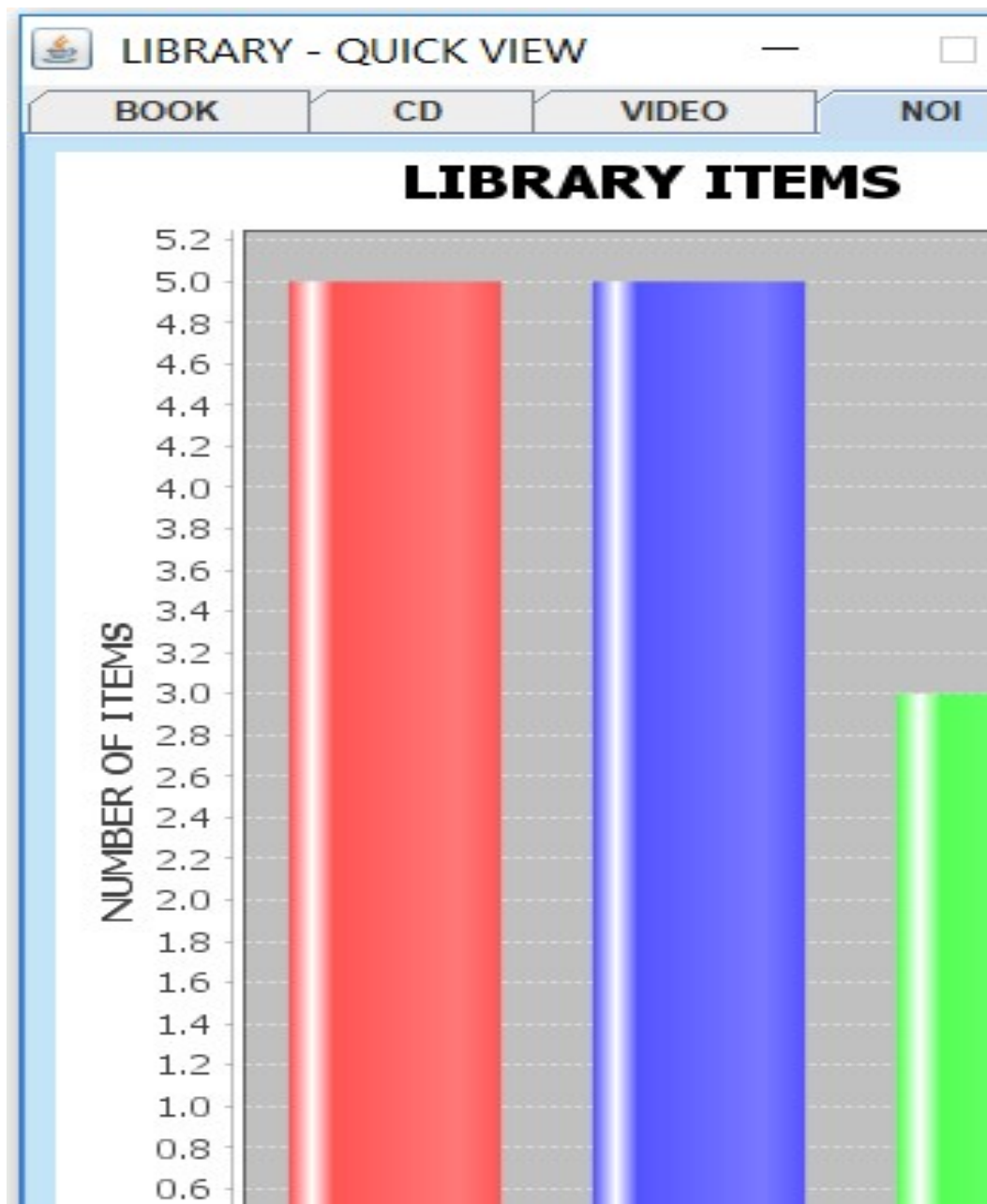
CLEAR

DELETE

ADD

TITLE	AUTHOR	ISBN	COMPOS...	TRACKIN...
b	b	b	b	b
c	c	c	c	c
a	a	a	a	a
e	e	e	e	e
d	d	d	d	d

An extended feature is added in a panel which shows the bargraph of all Library items. It has different tab panel and each bargraph of library displays the count of items currently present. This gives a quick view of collection of items.



4. CONCLUSION

- The Library management system automates the library system and eliminates the tedious manual entry and updating the records.
- There are people who will always prefer reading by Book and keeps collection of items like cds and videos. The application will provide a utility to those people and organize the personal library items.
- The application being software based is easy, simple to use and more reliable.